

14 Apr 1993

EB0JM-A

ECHO BOX

1. GENERAL. This procurement requires a portable, hand-tuned, low-loss, high-Q echo box for use in performance testing and maintenance of radars.

2. CLASSIFICATION. Type II, Class 5, Style D, and Color R in accordance with MIL-T-28800 for shipboard applications. The electromagnetic interference requirements are not invoked.

3. MEASUREMENT CAPABILITIES. The equipment shall be capable of radar performance testing within the minimum specifications identified below.

3.1 Ring time measurements.

3.1.1 Frequency range. 2.7 to 2.9 GHz.

3.1.2 Ring time. The equipment shall be capable of generating a ring time equivalent to 6,000 yards when used with a radar set with the following parameters:

- a. Receiver sensitivity: -110 dBm.
- b. Transmitter average power: 875W.
- c. PRF: 1,000 Hz.
- d. Pulse width: 0.6 us.
- e. Directional coupler: 25 dB.

3.1.3 Ring time sensitivity. Charts shall be provided with the equipment to express the ring time sensitivity in terms of yards of ring time lost per decibel lost.

3.1.4 Resonant cavity Q. 37,000 nominal.

3.2 Wavemeter operation. Frequency range: 2.7 to 2.9 GHz. Accuracy: ± 2 MHz.

3.2.1 Indicating meter. The equipment shall be provided with an analog meter for use in determining the mode of operation and frequency.

3.3 Input impedance. 50 ohms nominal.

4. GENERAL REQUIREMENTS.

4.1 Weight. 20 kg (44 lb) maximum.

4.2 Lithium batteries. Per MIL-T-28800, lithium batteries are prohibited without prior authorization. A request for approval for the use of lithium batteries, including those encapsulated in integrated circuits, shall be submitted to the procuring activity at the time of submission of proposals. Approval shall apply only to the specific model proposed.